VEYNGEROV, M. L.

51-4-20/26

AUTHORS: Veyngerov, M. L. and Sivkov, A. A.

TITLE: A Method of Study of Emission Spectra of Gases at Room Temperature. (Metod issledovaniya spektrov ispuskaniya gazov, nakhodyashchikhsya pri komnatnoy temperature.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr.4, pp.393-394. (USSR)

ABSTRACT: A negative optico-acoustical effect was discovered in 1950 (Ref.1) and applied to gas analysis (Ref.2). This effect was used to obtain infrared emission spectrum (in the 15μ region) of carbon dioxide. The apparatus included an infrared monochromator with a rock-salt prism. A mirror was placed at 45° to the beam at the monochromator exit. Below this mirror a Dewar vessel (refrigerator) with liquid air was placed. Between the mirror and the monochromator exit slit a disc with apertures was rotated (interruption rate of 430 c/s). In front of the entrance slit of the monochromator an optico-acoustical chamber filled with CO_2 was placed. This chamber contained a microphone. Depth of gas in the chamber was 10 mm. An alternating current from the microphone was

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A Method of Study of Emission Spectra of Gases at Room Temperature.

amplified and measured with a mirror galvanometer. The figure (p.394) shows the galvanometer deflection against wavelength for CO_2 at room temperature. The reasons for this effect are as follows. Carbon dioxide emits when an optical path is open between the chamber and the refrigerator, since the latter is at a much lower temperature. Due to this emission temperature in the chamber falls. Then rotation of the disc interrupts the optical path to the refrigerator and temperature rises again. This causes pressure pulsations recorded as a current by the galvanometer. Presence of carbon dioxide in air outside the chamber weakens the effect described here. The method may be extended to about 100 μ. There is 1 figure and 2 references, both of which are Slavic.

ASSOCIATION: Leningrad Institute of Precision Mechanics and Optics. (Leningradskiy institut tochnoy mekhaniki i optiki.)

VEYNGEROV, M. L.

PHASE I BOOK EXPLOITATION SOV/5850

SOV/9-M-8(11)

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii imeni V. I. Vernadskogo. Komissiya po analiticheskoy khimii

Spektrofotometricheskiye i kolorimetricheskiye metody analiza (Spectrophotometric and Colorimetric Methods of Analysis) Moscow, 1960. [illegible] p. (Series: Its: Trudy, tom. 8 (11)) Errata slip inserted. 3,000 copies printed.

Resp. Ed.: I. P. Alimarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: V. M. Pashkova; Tech. Ed.: N. L. [illegible]

PURPOSE: The publication is intended for chemists, particularly analytical chemists and geochemists.

COVERAGE: This collection of 29 articles is published as Volume VIII (XI) of the Transactions of the Committee on Analytical Chemistry at the Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR. The general subject of the volume is the investigation of spectrophotometric and colorimetric analysis. Individual articles on the following topics may deserve special attention: the present state of light absorption analysis, the sensitivity of the colorimetric methods of inorganic analysis, the basic variations of the kinetic method of analysis, spectrophotometric investigation of heteropolyacids of germanium, a new colorimetric method of determining small quantities of thallium, a fluorimetric method of determining uranium, spectrophotometric investigation of the behavior of oxidation-reduction indicators, a phasometric optical-acoustical method of gas analysis, and a description of an automatic spectrophotometric gas analyzer. No personalities are mentioned. References are given at the end of each article.

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AVAILABLE: Library of Congress

Card 6/6

JA/dwm/fal
8-29-60

27

SOV/51-4-6-15/24

AUTHORS: Veyngerov, M.L., Nechayeva, L.M., Pankratov, N.A., and Sivkov, A.A.

TITLE: A New Method of Investigation of Emission Spectra of Bodies at Room Temperature (Novyy metod issledovaniya spektrov ispuskaniya tel, nakhodyashchikhsya pri komnatnoy temperature)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol IV, Nr 6, pp 797-799 (USSR)

ABSTRACT: A new differential method of investigation of emission spectra of bodies at room temperature is reported. This method is based on the use of two refrigerators, in the same way as in the analysis of gases by means of the negative optico-acoustic effect described in Ref 3. Principles of the method can be seen from Fig 1. In front of a monochromator slit 1 there is a plane mirror 2, a concave mirror 3 and a non-selective optico-acoustic receiver (see Ref 4). The signal produced by the receiver 4 is amplified by the amplifier 5 and after synchronous rectification by a detector 6 is measured by a mirror galvanometer 7. In front of the other monochromator slit a mirror modulator 8 and two vessels 9 and 10 filled with liquid air are placed. A generator for the synchronous detector is on the axle of a motor 11. Directly above each vessel filled with liquid air there is a cell which has sylvite windows. Plane mirrors are placed at an angle of 45° to the

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horizontal above each of these cells. The arrangement is shown in Fig 1 on the right-hand side. According to the position of the mirror modulator 8, radiational exchange between the receiver 4 and one or other of the liquid-air refrigerators will occur. The resulting signal produced by the receiver is equal to zero unless one of the cells is filled with the gas to be studied. In the latter case the resulting signal is proportional to emission of gas in the spectral region selected by the position of the monochromator prism. Using the apparatus described the authors obtained emission spectrum of methane at room temperature in the region near 8 μ. The results obtained are shown in Fig 2. The monochromator slit widths used were 2 mm which correspond to a spectral interval of 0.73 μ. The method described can be applied to liquids and solids, as well as to gases. The authors point out that Stepanov and Khvashchevskaya (Ref 7) described an apparatus consisting of a refrigerator, a monochromator, the substance studied and a receiver which was used to obtain curves from which by the usual methods the absorption or emission spectrum

A New Method of Investigation of Emission Spectra of Bodies at Room Temperature SOV/51-4-6-15/24

could be obtained. There are 2 figures and 5 Soviet references.

ASSOCIATION: Gosudarstvennyy Opticheskiy Institut im. S.I. Vavilova (State Optical Institute imeni S.I. Vavilov)

SUBMITTED: November 27, 1957

Card 3/3

SLOBODSKAYA, P.V.; GERLOVIN, Ya.I.; VEYNGEROV, M.L.

Phasometric opticoacoustic method for gas analysis. Trudy kom. anal. khim. 8:252-257 '58. (MIRA 11:8)

1.Gosudarstvennyy opticheskiy institut im. S.I. Vavilova.
(Gases--Analysis)

SOV/51-6-5-31/34

24(4)

AUTHORS: Veyngerov, M.L., Sivkov, A.A. and Petrov, A.P.

TITLE: Crookes' Radiometer as a Modulator of Radiation (Radiometr Kruksa v kachestve modulyatora izlucheniya)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 5, pp 713 (USSR)

ABSTRACT: Under some conditions it is not possible to use modulators of radiation which are rotated by an electric motor. The authors found that a modified Crookes' radiometer can be also used as a radiation modulator. The moving system of the radiometer consisted of four mica plates blackened on one side and aluminized on the other. These plates were suspended at 45° to the vertical. A radiation flux which caused the radiometer to rotate was directed horizontally on to the blackened sides of the plates. Radiation flux which was to be modulated was directed vertically on to the aluminized sides of the plates and was interrupted when these plates rotated. The rate of rotation of the radiometer depended on the vacuum and on the intensity of the horizontal radiation flux, which moved the plates. The highest rate of rotation was achieved at 2×10^{-2} mm Hg with the horizontal flux intensity of 0.5 W. The radiometer rotated then at 13 rev/sec, equivalent to a modulation frequency

Card 1/2

of 52 c/s. This frequency could be decreased continuously to zero. The maximum diameter of the cross-section of the modulated beam was 10 mm. Another variant of the Crookes' radiometer with two series of plates could also be used as the radiation modulator. In this case one series of plates was fixed vertically and was used for rotation of the radiometer, while the other was used to modulate the vertical radiation flux.

SUBMITTED: January 9, 1959

PAVLENKO, V.A., glavnyy red.; VEYNGEROV, M.L., red.; GARBER, D.G., red.; KREMLEVSKIY, P.P., red.; ORSHANSKIY, D.L., red.; TURICHIN, A.M. red. [deceased]; KOHYAKOV, N.I., tekhn. red.

[Automatic gas analyzers] Avtomaticheskie gazoanalizatory. Moskva, TSentr. in-t nauchno-tekhn. informatsii elektrotekhn. promyshl. i priborostroeniia, 1961. 598 p. (MIRA 15:5)

1. Nauchno-tekhnicheskaya konferentsiya po avtomaticheskim gazoanalizatoram, Leningrad, 1960. 2. Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya Akademii nauk SSSR (for Pavlenko, Orshanskiy).
(Gases--Analysis)

S/051/61/011/006/012/012
E032/E514

AUTHORS: Veyngerov, M.L., Sivkov, A.A. and Pien Nang-hua

TITLE: A hot filament tube with a radiometric modulator

PERIODICAL: Optika i spektroskopiya, v.11, no.6, 1961, 780-781

TEXT: This is a continuation of work reported by the first two of the present authors and A. P. Petrov (Ref.1: Opt. i spektr., 6, 713, 1959). A description is given of a tube consisting of a hot filament and a set of moveable vanes immediately above it (Fig.1). The vanes are at 45° to the axis of rotation and are made of 0.05 mm aluminium foil with 0.03 mm mica plates attached to them. The filament is in the form of a cylindrical spiral and is made of tungsten wire. The tube is filled with nitrogen to a pressure of a few hundredths of mm Hg. Both sides of the vanes are coated with lamp black. Fig.2 shows the relation between the modulation frequency (left-hand scale) and the power input W (watts). The angular velocity is also indicated (rps). The curve tends to "saturate" as a result of frictional forces. The "saturation" may be made to appear at lower velocities by increasing gas pressure. There are 2 figures and 1 Soviet-bloc reference.

Card 1/2

A hot filament tube with a ...

S/051/61/011/006/012/012
E032/E514

SUBMITTED: January 26, 1961

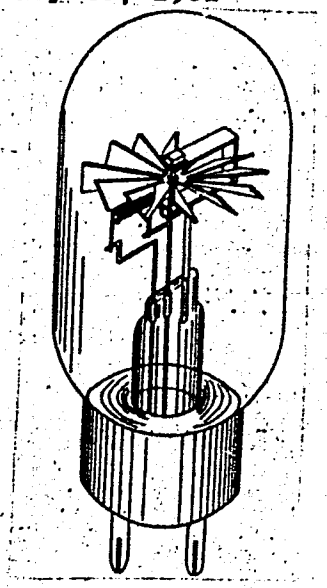

Fig.1

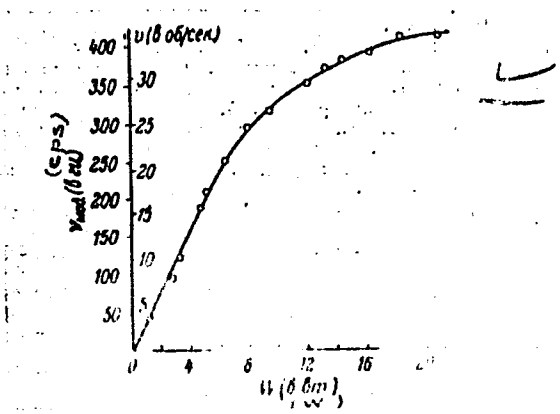

Fig.2

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L 5419-66

ACC NR: AP5025087 SOURCE CODE: UR/0368/65/003/003/0221/0224

AUTHORS: Veyngerov, M. L.; Miao, Chia-ting

49
13

ORG: none

TITLE: Optic-acoustic gas analyzer with fixed zero-point scale reading

10

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 221-224

TOPIC TAGS: gas analyzer, carbon dioxide, acoustic receiver, gas analysis

ABSTRACT: An improved optic-acoustic gas analyzer is described. The device is an improvement over that described by H. Hummel (Chem. Ing. Techn., No. 12, 776, 1957). The principles of operation of the analyzer are depicted in Fig. 1. A schematic of the apparatus is also given. The gas mixture to be analyzed is introduced into the wedge-like absorption cell situated between the radiation source and the optical-acoustic receiver. The latter usually contains the gas to be determined. By rotating the absorption cell about an axis parallel to the incident radiation flux, the thickness of the irradiated gas layer periodically changes. This, in turn, causes a modulation of the radiation flux, the magnitude of which is proportional to the concentration of the gas in question in the

Card 1/3 UDC: 543.271:681.4

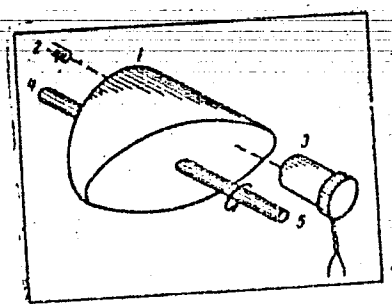

Fig. 1. Principle of the optic-acoustic gas analyzer with fixed zero-point scale reading. 1- absorption cell; 2- radiation source; 3- receiver; 4 and 5- axis of rotation

mixture. If the gas is absent, no modulation occurs. This corresponds to the zero scale position of the device. The analyzer was used in the determination of $C\emptyset_2$ concentration in the region of 0 to 2%. The experimental results are shown graphically (see Fig. 2). It is suggested that the analyzer should prove useful in situations in which the zero-point reading changes as a result of optical asymmetry arising from the various parts of the system.

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ACC NR: AP5025087

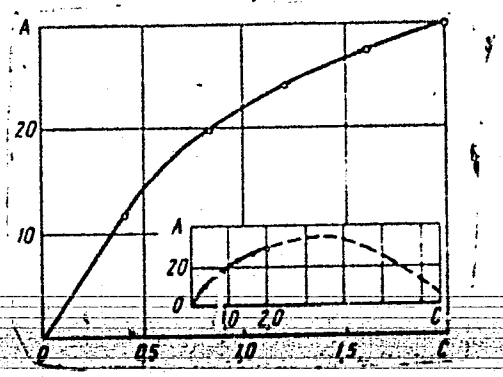


Fig. 2. Calibrating curve (A- reading of light source voltmeter, relative units; C- concentration of CO_2 (in %) in absorption cell

Orig. art. has: 3 graphs.

SUB CODE: OP,GC/ SUBM DATE: 09Dec64/ ORIG REF: 002/ OTH REF: 001

BVK

Card 3/3

VEYNGEROV, M.L.; SIVKOV, A.A.

Single-beam optico-acoustic gas analyzer. Opt. i spektr. 8 no.5: 735 My '60. (MIRA 13:9)

(Gases--Analysis)

USSR/Pharmacology and Toxicology. Cholinergics

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47191

Author : Veyngol'd-Rybkina I.V.
Inst : -
Title : The Use of Eserine and Small Doses of Apomorphine for the Control of Excitation in Mental Patients.

Orig Pub : Sov. zdravookhr. Kirgizii, 1957, No 4, 34-40

Abstract : In order to remove the sharp manifestations of excitation in mental patients, it is recommended that subcutaneous injection of apomorphine hydrochloride (A) in relatively small doses (0.3-0.5 ml. of 0.2% solution) not producing nausea and vomiting, as a rule, be effected. A positive effect (calming after 5-30 min. following introduction of A) was noted in 200 observations on 90 patients, in 84.5% of cases. The effect of A is short-lived (a few hours). It is expedient to apply A in excited conditions before and after the shock phase of insulin hypoglycemia, as well as together with

Card : 1/2

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 47191

barbiturates in the treatment by discontinuous sleep, since A contributes to the shortening of the phase of pre-narcotic excitation and increases the hypnotic effect of barbiturates. In order to combat the psychomotor excitation in 115 mental patients, including 60 affected with schizophrenia, eserine salicylate (ES) was applied (1 ml. of 0.1% solution, subcutaneously, twice a day). In the majority of patients with delirio-amential affections, a hallucinatory-paranoic form of schizophrenia and presenile psychoses, on the 3rd-4th day of treatment with ES, a prolonged and lasting decrease of excitation could be achieved. Complications in the treatment with ES (excessive state of inhibition, nausia) were observed in 16.5% of cases.--S.M. Shteynberg

VEYNGOL'D-RYBKINA, I. V.:

VEYNGOL'D-RYBKINA, I. V.: "The use of apomorphine and ezerine to combat the causative agent in mental patients." Kirgiz State Medical Inst. Frunze, 1956 (Dissertation for the Degree of Candidate in Science)

So: Knizhnaya letopis' No. 38, 1956 Moscow

VEYNGOLD-RYBKINA, I.V., Cand Med Sci--(diss) "The use of apomorphine and eserine to combat excitation in mental patients." Frunze, 1957. 16 pp (Kirgiz State Med Inst), 250 copies (KL,28-58,113)

-159-

VEYNGOL'D-RYBKINA, I.V.

Letter to the editor. Zhur. nevr. i psikh. 64 no.2:319 '64. (MIRA 17:5)

AUTHOR - RYBKINA, I.V.

USSR/Pharmacology - Toxicology - Tranquilizers. U-5

Abs Jour : Ref Zhur - Biol., No 3, 1958, 12997

Author : Veyngol'd - Rybkina, I.V.
Inst : -
Title : On the Use of Reserpine in Psychiatric Diseases.

Orig Pub : Sov. zdravookhr. Kirgizii, 1957, No 4, 58-59.

Abstract : No abstract.

Card 1/1

VEYNIK, A., prof.

Regularities are better than fortuity. Tekh. mol. 31 no.3: 10-12 '63. (MIRA 16:6)

1. Chlen-korrespondent AN BSSR.
(Engineering)

VEYNIK, A.I.

Mathematical formulation of the problem on the freezing of wet ground. Sbor. nauch. trud. Fiz.-tekh.inst. AN BSSR no.7:179-183 '61. (MIRA 15:7)

(Soil freezing)

VEYNIK, A.I.

Experimental determination of the heat capacity of electrons. Izv.vys. ucheb.zav.;fiz.no.2:173-174 '63. (MIRA 16:5)

1. Belorusskiy politekhnicheskiy institut.
(Thermoelectricity)

VEYNIK, Al'bert Iozefovich; TETERINA, L.N., red.

[Shrinkage phenomena and the feeding of castings] Usadochnye iavleniia i pitanie otlivok. Minsk, Vysshaia shkola, 1964. 32 p. (MIRA 18:6)

BONDAREV, Vladimir Aleksandrovich; VEYNIK, Al'bert Iozefovich, prof.; MIKHAYLOVA, Liya Maksimovna; PROTSKIY, Anatoliy Yefimovich; GLINKIN, P., red.

[General heat engineering; a laboratory manual] Obshchaia teplotekhnika; laboratornyi praktikum. [By] V.A. Bondarev i dr. Minsk, Vysshaia shkola, 1965. 131 p. (MIRA 18:10)

1. Chlen-korrespondent AN Belorusskoy SSR (for Veynik).

VEYNIK[redacted], A. I., Engr. Cand. Tech. Sci.

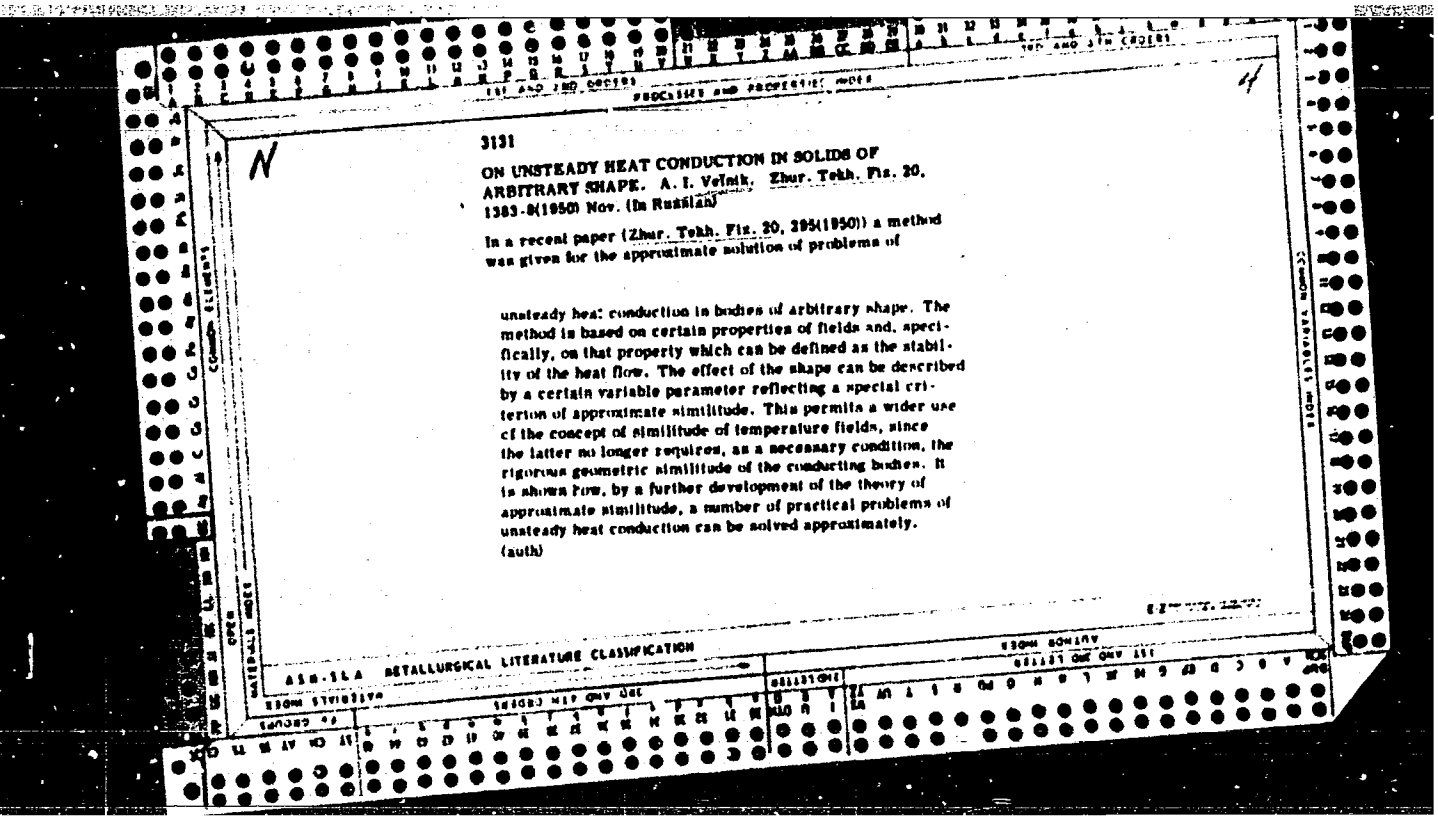
Dissertation: "Heating and Cooling of Solids." Moscow Aviation Technological Inst, 5 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

VEYNIK, A. I. and GUKHMAN, A. A.

"The Theory of Heat Exchange Between Casting and Form: Selection of the Optimum Wall Thickness of the Metal Mold", Zhurnal Tekhnicheskoy Fiziki, Vol. 20, No. 9, pp 1029-1038, 1950.

SO: W-17131, 1 Mar 1951



3131

ON UNSTEADY HEAT CONDUCTION IN SOLIDS OF ARBITRARY SHAPE. A. I. VeTnik. Zhur. Tekh. Fiz. 20, 1383-8(1950) Nov. (In Russian)

In a recent paper (Zhur. Tekh. Fiz. 20, 295(1950)) a method was given for the approximate solution of problems of unsteady heat conduction in bodies of arbitrary shape. The method is based on certain properties of fields and, specifically, on that property which can be defined as the stability of the heat flow. The effect of the shape can be described by a certain variable parameter reflecting a special criterion of approximate similitude. This permits a wider use of the concept of similitude of temperature fields, since the latter no longer requires, as a necessary condition, the rigorous geometric similitude of the conducting bodies. It is shown here, by a further development of the theory of approximate similitude, a number of practical problems of unsteady heat conduction can be solved approximately. (auth)

VEYNIK, A.I.

Innovations in chill casting. Mashinostroenie no.5:51-56 S-O '63. (MIRA 16:12)

1. Chlen-korrespondent AN BSSR.

VEYNIK, A. I.

PA 195T51

USSR/Metals - Casting Mar 51

"Effect of Convection on the Process of Ingot Solidification," A. I. Veynik, Cand Tech Sci, MATI (Moscow Avn Technol Inst)

"Litey Proizvod" No 3, pp 14-16

Study of phys conditions of solidification brought the conclusions: Natural convection has no effect on the crystn rate of an ingot under normal conditions (only slight overheating). Measures which contribute to directional crystn and decrease height of shrinkage cavity are decrease in intensity of

195T51

USSR/Metals - Casting (Contd) Mar 51

heat elimination from the sides and top of an ingot, increased heat elimination through the mold bottom, and more efficient thermal insulation of head.

195T51

VEYNIK, A. I.

USSR/Metals - Castings, Molds Jun 51

"Thermal Calculation of a Nonmetallic Mold," A. I. Veynik, Cand Tech Sci, Moscow Avn Technol Inst

"Litey Proizvod" No 6, pp 20-22

Discusses the influence of nonmetallic mold on the crystn process in castings and suggests formulas which express relations among various factors during solidification of castings.

196T93

VEYNIK, A. I.

PA 196T99

USSR/Metals - Casting, Equipment Jul 51

"Thermal Design of Metal Mold by the Method of Finite Differences," A. I. Veynik, Cand Tech Sci, Moscow Avn Technol Inst

"Litey Proizvod" No 7, pp 16-18

Method of finite differences facilitates analysis, in calcn process, of significance of various mold parameters which have effect on solidification of casting. It permits consideration of temp changes in thermo-phys consts of materials of casting and mold and their

196T99

USSR/Metals - Casting, Equipment (Contd) Jul 51

heat-loss coeffs, and also change in value of gap between mold and casting in the process of cooling. Method is applicable to castings of limited small thickness.

196T99

VEINIK, A. I.

A. I. Veinik and A. A. Gukhman. "Analysis of conditions of thermal interaction between casting and mold. P. 51

Moscow Inst. of Aviation
Technology
Chair of Thermotechnics.
Jan. 10, 1950

So: Journal of Technical Physics, Vol. 21, No. 1 (Jan. 1951)

VEINIK, A. I.

A. I. Veinik and A. A. Gukhman. Methods for calculating the crystallization processes in casting. P. 65

Moscow Inst. of Aviation Technology
Chair of Thermotechnics
Jan. 15, 1950

SO: Journal of Technical Physics, Vol. 21, No. 1 (Jan. 1951)

BJR

Foundry Practice - 5

47° **The Cooling of Castings.** (Russian) A. I. Vymk. *Dok. Akademii Nauk SSSR*, new ser., v. 85, July 21, 1951. p. 559-562.

The mechanics and thermodynamics of the cooling of castings, particularly in metallic molds, are discussed.

VEINIK, A. I.

Method for determining thermal conductivity of mold coatings. A. I. Veinik. *Liteinoe Proizvodstvo* 1952, No. 5, 20–4.—A rectangular cast mold is lined with the material under investigation, and filled with a metal at its solidification temp., the time of complete solidification is measured by plotting the temp. of the metal and of the outside of the mold against the time, and the thermal cond. l detd. from the formula $l = Q_L X/(t_1 - t_2)FT$ kcal./sq. m./hr., where X is the thickness of the coating, Q_L is heat of solidification of the metal, t_1 and t_2 are temps. of the mold wall before and after solidification, and T is the time of complete solidification. Exptl. practice and the results obtained are commented upon in detail.

L. D. Gat

VEYNIK, A. I.

USSR/Metals - Casts

Feb 52

"Crystallization of Cast in a Nonmetallic Mold," A. I. Veynik, Moscow Avn Technol Inst

"Zhur Tekh Fiz" Vol XXII, No 2, pp 277-284

Correct theory explaining process of heat exchange between cast and mold is necessary for selection of proper solidifying conditions. Currently applied theory by N. Chworinoff (cf. "Die Giesserei" 27, 177, 201, 222, 1940) shows some deficiencies, analyzed in this article. Indebted to A. A. Gukhman. Received 30 Mar 51.

209T84

VEYNIK, A. I.

USSR/Metals - Casts Feb 52

"Crystallization of Cast in a Metallic Mold," A. I. Veynik, Moscow Avn Technol Inst

"Zhur Tekh Fiz" Vol XXII, No 2, pp 285-293

Derives formulas of heat exchange between cast and mold and between thickness of solidified crust and time, last particularly important because it characterizes crystn of metal and quality of cast. Exptl data were in agreement with theoretical results. Indebted to A. A. Gukhman. Received 2 Jul 51.

209T85

VEYNIK, A. I.

Founding

Cooling of casting. Dokl. AN SSSR 85 no. 3, 1952

Monthly List of Russian Accessions, Library ofCongress, November 1952. UNCLASSIFIED.

VEYNIK, A. I.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 600 - I

BOOK

Author: VEYNIK, A. I. Call No.: AF617183

Full Title: HEAT PRINCIPLES IN THE THEORY OF CASTING

Transliterated Title: Teplovyye osnovy teorii lit'ya

PUBLISHING DATA

Originating Agency: None

Publishing House: State Scientific and Technical Publishing House on Machine-Building and Shipbuilding Literature (MASHGIZ)

Date: 1953 No. pp.: 383 No. of copies: 4,000

Editorial Staff

Technical Editors: Model', B. I. and Sokolova, T. F.

Appraisers: Konstantinov, L. S., Bidulya, P. N. and Rykalin, N. N.

PURPOSE: For foundry technicians, personnel of scientific research institutions, students and teachers of foundry operation.

TEXT DATA

Coverage: This book is a theoretical study of the cooling process in metallic and nonmetallic castings. Casting phenomena are grouped into four classes, namely: casting into nonmetallic molds, into chill molds, into ingot molds, and finally the casting of nonmetallic materials. In the process of formation of the ingot thermal phenomena play a basic role. The theory of heat transmission based on the

Teplovyye osnovy teorii lit'ya AID 600 - I

theory of analogies is widely applied.
No. of References: Total 60, 56 Russian, 1933-1952
Facilities: None

2/2

1. VEYNIC, A.I.

2. USSR (600)

4. Founding

7. Thermal theory of founding, Lit.proizv. no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

VEYNIK, A. I.

5536 Veynik, A. I. Lit'ye pod davleniyem. (Nekotoryye Raschet,). M., Mashgiz, 1954. 63 s.s. chert 22 sm 8.000 eks. 2r-(55-901) P 621.74.04

SO: Knizhnaya Letopis ' , Vol. 1, 1955

124-1957-1-455

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 1, p 58 (USSR)

AUTHOR: Veynik, A.I.

TITLE: Analysis of the Flow of Molten Metal in the Mold for Pressure Casting (Analiz protsessa techeniya rasplavlennogo metalla v forme dlya lit'ya pod davleniyem)

PERIODICAL: Lit'ye pod davleniyem. Moscow, Mashgiz, 1955, pp 14-30

ABSTRACT: It is noted that the thermal conditions that affect the process of casting must be considered in conjunction with the flow conditions that result from the action of the pressure plunger. Starting from certain assumptions, the Author derives formulas for the hydraulic and thermodynamic calculation of the process involved in the shaping of a casting. It is noted that the hydraulic formulas are obtained for the case of stationary flow, which is possible only in the presence of significant internal friction; otherwise the inertial forces would assume a considerable magnitude. It is also noted that the accuracy of calculations performed with these formulas, for all practical purposes, is fully adequate. In conclusion it is said that the hydraulic resistance of the mechanical device is no less important than the resistance of the mold, but that its calcul-

Card 1/2

124-1957-1-455

Analysis of the Flow of Molten Metal in the Mold (cont.)

ation in principle does not differ from that of the mold and, hence, there is no need for including it in the present paper.

A.N.Klimentov

1. Liquid metals--Flow--Analysis

Card 2/2

VEYNIK, A.I.

AID P - 2577

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 16/16

Authors : Gukhman, A. A., Doct., Phys. Math. Sci., Prof.
Shumayev, A. I. and A. I. Veynik, Docs. Tech. Sci., Profs.
Temkin, A. G., Kand. Tech. Sci.
Blokh, A. G., Kand. Tech. Sci.

Title : A. F. Chudovskiy Teplo obmen v dispersnykh sredakh (Heat Exchange in Dispersion media) Gosenergoizdat, 1954. (Book Review)

Periodical : Teploenergetika, 8, 60-64, Ag 1955

Abstract : The book is an analysis of large-grain dispersion material. The reviewers consider the book as a timely contribution to Soviet science, although it is not devoid of some small errors.

Institution : None

Submitted : No date

VEYNIK, A.I.

[Heat conductivity testing of paints for molds] Ispytanie kokil'nykh krasok na teploprovodnost', Moskva, Mashgiz, 1956. 231 p. (MLRA 9:12)
(Heat--Transmission) (Founding)

VEYNIK, Al'bert Iosifovich; GUKHMAN, A.A., professor, doktor fiziko-matematicheskikh nauk, redaktor; SUSHKIN, I.N., redaktor izdatel'stva; BERLOV, A.P., tekhnicheskiy redaktor

[Technical thermodynamics and principles of heat transmission] Tekhnicheskaia termodinamika i osnovy teploperedachi. Pod red. A.A.Gukhmana. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 448 p. (MLRA 9:9)
(Thermodynamics) (Heat--Transmission)

VEYNIK, A.I.

USSR/Atomic and Molecular Physics - Statistical Physics
Thermodynamics D-3

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 719

Author : Veynik, A.I.
Inst : -
Title : Concerning the Non-Equilibrium Nature of Thermodynamic Processes.

Orig Pub : Tr. Mosk. tekhnol. in-t pishch. prom-sti, 1956, vyp. 8, 233-236

Abstract : The author introduces a criterion of non-equilibrium in thermodynamic processes $k_{\xi} = \delta P/P^{-} \leq 1$, where $\delta P = P^{-} - P^{-}$ is the deviation of the potential P^{-} at a certain point from the average value P^{-} taking over the volume, as well as a non-static criterion $K_{\Delta} = \Delta P/pi << 1$, where $\Delta P = pe - pi$ (pe is the potential of the surrounding medium). By way of an equilibrium criterion under non-static conditions, the author proposes the

Card 1/2

USSR/Atomic and Molecular Physics - Statistical Physics
Thermodynamics. D-3

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 719

ratio K_{ζ} / K_{Δ} . Comparison with the Biot number in the case of heat transfer and the Mach number in the case of mechanical action shows that the processes will be equilibrium-non-static if, respectively, the heat conduction in the system exceed sufficiently the rate of heat exchange on the surface and if the velocity of sound in it exceeds the speed of compression.

Card 2/2

VEYNIK, A.I.

SHUBIN, A.S., VEYNIK, A.I., professor, doktor tekhnicheskikh nauk, redaktor

[The use of radioactive isotopes in studies of the process of convection drying] Issledovanie metodom radioaktivnykh izotopov protsessa konvektivnoi sushki. Pod obshchei red. A.I. Veinika. Moskva, M-vo vysshego obrazovaniia, 1957. 19 p. (MLRA 10:5)

1. Chlen-korrespondent AN BSSR. (for Veynika)
(Radioisotopes--Industrial applications)
(Drying apparatus--Food)

VEYNIK, A.I.

Equation of the gaseous state. Dokl. AN BSSR 1 no.1:7-11 Jl '57.
(MIRA 11:3)

1. Chlen-korrespondent AN BSSR.
(Equations) (Gases)

VEYNIK, A.I.

The thermodynamic theory of elasticity. Dokl. AN BSSR 1 no.2:48-51 O '57. (MIRA 11:2)

1. Chlen-korrespondent AN BSSR.
(Elasticity)

Veynik, A.I.

137-1957-12-23836

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 139 (USSR)

AUTHOR: Veynik, A. I.

TITLE: Theory of the Solidification of Castings (Teoriya zatverdevaniya otlivok)

PERIODICAL: Novoye v liteyn. proiz-ve. Nr 2. Gor'kiy, Knigoizdat, 1957, pp 11-50

ABSTRACT: The Author presents some of the principles involved in planning the technological process of casting on the basis of calculation formulas expressed in terms of the criterion $K = \beta/\lambda \chi$, where β is the coefficient of thermal conductivity through the gap between the casting (C) and the mold (M) which characterizes the intensity of the heat-transfer process. In turn $\beta = \lambda_{gap}/\chi_{gap}$ in these expressions λ is the coefficient of thermal conductivity of the material of the C or of the M, λ_{gap} is the effective coefficient of thermal conductivity of the substance filling the gap, X is the half-thickness of C or the wall thickness of the M, and X_{gap} is the width of the gap. The criterion K is a measure of the ratio of the temperature drop within the C (or the M) to the temperature drop within the gap. By combining the

Card 1/2

Theory of the Solidification of Castings

boundary values of the criterion K, four separate instances of the cooling of C in metallic and non-metallic M's were obtained. An analysis of the forming process of the C was performed, and examples were computed for directional and simultaneous solidification of the C, and for progressive and volumetric solidification of the metal. Discussed also is the effect of the solidification rate on the metal structure, and the effect of superheating on the solidification process. In particular, in the example of the C of a cam, the calculations indicated that no chilling occurs when the casting is poured (without cooling) into sand M's and the following chemical composition (in percent) of melt is used: C 3.25-3.45, S 2.3-2.5, Mn 0.6-0.8, S $\leq$ 0.1, P $\leq$ 0.2, Cr 0.3-0.5, Ni 0.3-0.5. This is due to the fact that the average linear rate of solidification of cast iron (10 mm/min) is less than the lower limit for chilling of gray cast iron (18 mm/min), whereas, when casting with refrigeration, the solidification rate of 68.5 mm/min results in a chilling of the tips of the cams due to the high intensity of heat transfer (47 mm/min is the upper limit of the solidification rate resulting in chilling).

L. D.

Card 2/2 1. Castings-Solidification-Theory

Veynik, A.I.

VEYNIK, A.I.

New problems in the theory of heat. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.2:22-28 '57. (MIRA 11:1)

1.Chlen-korespondent AN BSSR.
(Heat--Conduction)

SOV/137-58-10-21764

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 187 (USSR)

AUTHOR: Veynik, A.I.

TITLE: A Method for the Determination of the Intensity of Heat Exchange in Molten Metals by Free Convection (Metod opredeleniya intensivnosti teploobmena v rasplavlennykh metallakh pri yestestvennoy konvektsii)

PERIODICAL: Tr. In-ta energ. AN BSSR, 1957, Nr 3, pp 62-67

ABSTRACT: To determine the intensity of heat exchange in molten metal by free convection the author proposes the use of the method of immersion into the melt of the body of a specimen (S) of suitable shape which possesses a specified thermal resistance on the surface. During the interaction of S with the molten metal the heat flow passing into the S at first is quite considerable, which causes the formation of a hardened crust of a certain thickness on the surface of S. Then, with progressive heating of the S the heat flow decreases and the hardened crust gradually melts. This is explained by the fact that the amount of heat entering the S through the crust becomes smaller than the amount of heat transferred to the crust from the molten metal. The

Card 1/2

A Method for the Determination of the Intensity of Heat Exchange (cont.)

resulting excess of heat is expended on the melting of the crust. If the S is removed from the molten metal bath before the crust is completely melted, then it is possible to judge the magnitude of the heat flow and the value for the coefficient of heat transfer from the thickness (or weight) of the remaining solid metal. To put the proposed method into practice formulas are developed for the relationship between the thickness of the hardened crust and the value of the heat-transfer coefficient. To simplify the problem it is assumed that the thickness of the hardened crust is small compared to the dimensions of the S, and, therefore, in the thermal sense, the crust is regarded as a plane partition. Moreover, the temperature drop occurring within the crust as a result of the cooling of its inner surface (in contact with S) below the temperature of crystallization is disregarded.

1. Metals (Liquid)--Heat transfer 2. Heat transfer---Measurement L. G.
3. Convection

Card 2/2

VEYNIK, A.I.

VEYNIK, A.I.; SHUBIN, A.S.

Using the tracer technique for studying phase transformations of moisture in the process of drying. Trudy MTIPP no.8:110-114 '57. (MIRA 10:12)

(Drying)

VEYNIK, A.I.

USSR/Atomic and Molecular Physics - Statistical Physics Thermodynamics. D-3

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 710

Author : Veynik, A.I.
Inst :
Title : Concerning the Theory of Heat.

Orig Pub : Tr. Mosk. tekhnol. in-t pishch. prom-sti, 1957, vyp. 8, 220-232

Abstract : The author considers the features of the formulation of the classical thermodynamics and its principal shortcomings of philosophical and physical character, and makes an attempt of indicating approximately the outlines of another thermodynamic, which would start from new concepts concerning the nature of heat and would be free of certain shortcomings inherent in the old theory.

Card 1/1

SOV/124-58-5-4944

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 1 (USSR)

AUTHOR: Veynik, A.I.

TITLE: On the Unbalance of Thermodynamic Processes (O neravnovesnosti termodinamicheskikh protsessov)

PERIODICAL: Tr. Mosk. tekhnol. in-t pishch. prom-sti, 1957, Nr 8, pp 233-236

ABSTRACT: Introduction of the criteria K_δ and K_Δ makes it possible to determine the degree of unbalance and nonstatic character of the real processes,

$$K_\delta = \delta P/P_m \text{ and } K_\Delta = \Delta P/P_m,$$

wherein δP is the deviation of the potential of a given point from the system's mean volumetric potential P_m, and ΔP the pressure of the potential on the outer face of the surface that separates the system from the surrounding medium. In unbalanced and nonstatic processes $K_\delta \approx 1$ and $K_\Delta \approx 1$, whereas in balanced and static processes $K_\delta \ll 1$ and $K_\Delta \ll 1$. The author emphasizes the considerable practical

Card 1/2

SOV/124-58-5-4944

On the Unbalance of Thermodynamic Processes

importance of the balanced nonstatic process characterized by the relationship $K = K_{\delta} / K_{\Delta} \ll 1$. An analysis of numerical values for these criteria shows that real thermomechanical processes occurring in piston engines and compressors can be regarded as balanced.

R.I. Artym

1. Thermodynamics--Mathematical analysis

Card 2/2

VEYNIK, A. F.

10(4); 21(5); 24(8) PHASE I BOOK EXPLOITATION SOV/2457

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke. 2d: Moscow, 1957

Teplotekhnika i gidrodinamika; trudy konferentsii, tom. 4 (Heat Engineering and Hydrodynamics; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science, Vol 4) Moscow, Gosenergoizdat, 1958. 88 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR, and USSR: Glavnoye upravleniye po ispol'zovaniyu atomnoy energii.

Eds.: M. A. Styrikovich (Resp. Ed.), O. Ye. Kholodovskiy, and M. S. Pomerantsev; Ed. of Publ. House: L. M. Sinel'nikova; Tech. Ed.: N. I. Borunov.

PURPOSE: This collection of articles is intended for scientists and laboratory workers concerned with the use of radioactive and stable isotopes.

COVERAGE: This collection of papers deals with the application of radioactive and stable isotopes as measuring tools in various types of scientific investigation. No personalities are mentioned. References are given after some of the articles.

LUKASHEV, K.I., akademik, red.; GLEBKO, P.F., akademik, red.; VEYNIK, A.I., red.; BULYGIN, I.A., red.; GOLUBTSOV, V.K., kand.geologo-mineralog.nauk, red.; MARIKS, L., red.izd-va; VOLOKHANOVICH, I., tekhn.red.

[Papers at the Conference of Young Scientists of the Academy of Sciences of White Russia] Materialy konferentsii molodykh uchenykh Akademii nauk BSSR. Minsk, 1958. 178 p. (MIRA 12:3)

1. Akademiya navuk BSSR, Minsk. 2. Akademiya nauk BSSR (for Lukashev, Glebko). 3. Chlen-korrespondent Akademii nauk BSSR (for Veynik, Bulygin).
(Science)

VEYNIK, A. I.

AKAD NAUK SSSR
ENERGETICHESKIY IN-T

Teplo- i massoobmen v protsessakh isparenlya (Heat- and Mass-Transfer in Evaporation Processes) Moscow, Izd-vo AN SSSR, 1958. 454 p. 3,000 copies printed.

Resp. Ed.: Lykov, A.V., Academician, BSSR Academy of Sciences; Eds. of Publishing House: Tal', A.A. and Smirnov, V.A.

PURPOSE: This book is intended for scientists and engineers in heat engineering and chemical technology and for students and teachers of higher educational institutions in these fields.

COVERAGE: This collection contains articles relating to analytical and experimental investigations of heat - and mass-transfer under conditions of phase and chemical transformations. A new method of solving unsteady-state heat-flow problems is presented. Methods of determining heat - and mass-transfer coefficients during the heating and drying of a composite substance are given. New experimental principles of surface heat- and mass-transfer in vaporization processes are explained and new

Card 1/5

Veynik, A.I. The Problem of Molecular Heat Transfer 198

18(7); 25(1) PHASE I BOOK EXPLOITATION SOV/1382

Veynik, Al'bert Iosifovich

Teoriya osobykh vidov lit'ya (Theory of the Special Types of Casting) Moscow, Mashgiz, 1958. 299 p. 5,000 copies printed.

Ed.: Novikov, P. G., Candidate of Technical Sciences; Ed. of Publishing House: Chernysheva, N. P.; Tech. Ed.: Uvorova, A. F.; Managing Ed. For Literature on Heavy Machine Building: Golovin, S. Ya., Engineer.

PURPOSE: This book is intended for industrial personnel, scientific research workers, students, and instructors.

COVERAGE: The book presents methods of calculating the heat of the metal-solidification process under the specific conditions of special types of casting (continuous, pressure, centrifugal, slush, etc.). The calculations are based on ideas developed earlier by the author in his book Teplovyye osnovy teorii lit'ya (Thermal Principles of the Theory of Casting). The theoretical analysis of

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the solidification process is in each case accompanied by a detailed examination of the physical basis of the phenomenon under investigation. This is designed to promote a deeper understanding of the nature of individual aspects of casting and, consequently, a more flexible control of the technological process for the production of high-quality castings. No personalities are mentioned. There are 63 references, of which 57 are Soviet, 5 English, and 1 German.

TABLE OF CONTENTS:

VEYNIK, A.I.

PHASE I BOOK EXPLOITATION 1216

Soveshchaniye po teorii liteynykh protsessov. 2d, Moscow, 1956

Zatverdevaniye metallov; trudy soveshchaniya... (Solidification of Metals; Transactions of the Second Conference on the Theory of Foundry Processes) Moscow, Mashgiz, 1958. 532 p. 3,500 copies printed.

Sponsoring Agencies: AN SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; and AN SSSR. Institut metallurgii.

Ed. (Title page): Gulyayev, B.B., Doctor of Technical Sciences, Professor; Ed. (Inside book): Novikov, P.G., Candidate of Technical Sciences; Ed. of Publishing House: Chernysheva, N.P.; Tech. Ed.: Uvarova, A.F.; Managing Ed. for Literature on Heavy Machine Building: Golovin, S.Ya., Engineer.

PURPOSE: This book is intended for a wide circle of engineers, technicians, and scientists working in the fields of general metallurgy, physical metallurgy, and the production of castings.

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COVERAGE: The book is a collection of 29 papers concerned with the determination of fixed patterns of metal solidification and also with the determination of favorable conditions for the production of sound castings. The authors discuss heat phenomena in metallic and sand molds, properties of mold materials, conditions of solidification of castings in shell molds, kinetics of the warming-up of porous bodies (molds), effect of alloy composition on the solidification process, conditions for the development of a zonal structure and of chemical heterogeneity of castings, and other matters of current interest. There are also discussions of the use of model testing and radioactive isotopes for studying solidification. No personalities are mentioned.

TABLE OF CONTENTS:

Solidification of Metals (Cont.) 1216

I. HEAT-TRANSFER PROCESSES IN THE SOLIDIFICATION OF CASTINGS

Card 3/8

VEYNIK, A.I., prof.

"External heat and mass exchange in the process of convective drying" by B.M. Smol'skii. Reviewed by A.I. Veinik. Inzh.-fiz.zhur. no.1:109 Ja '58. (MIRA 11:7)

1.Chlen-korrespondent AN BSSR.
(Heat--Radiation and absorption) (Drying)

SOV/137-58-10-20348

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 1 (USSR)

AUTHOR: Veynik, A. I.

TITLE: International Conference on Scientific Uses of Radio Isotopes (Mezhdunarodnaya konferentsiya po primeneniyu radioizotopov v nauchnykh issledovaniyakh, Parizh, 9-20 sent. 1957 g.)

PERIODICAL: Inzh.-fiz. zh., 1958, Nr 1, pp 110-111

ABSTRACT: Papers are heard on the applications of isotopes in the study of metal structures, diffusion processes, etc.

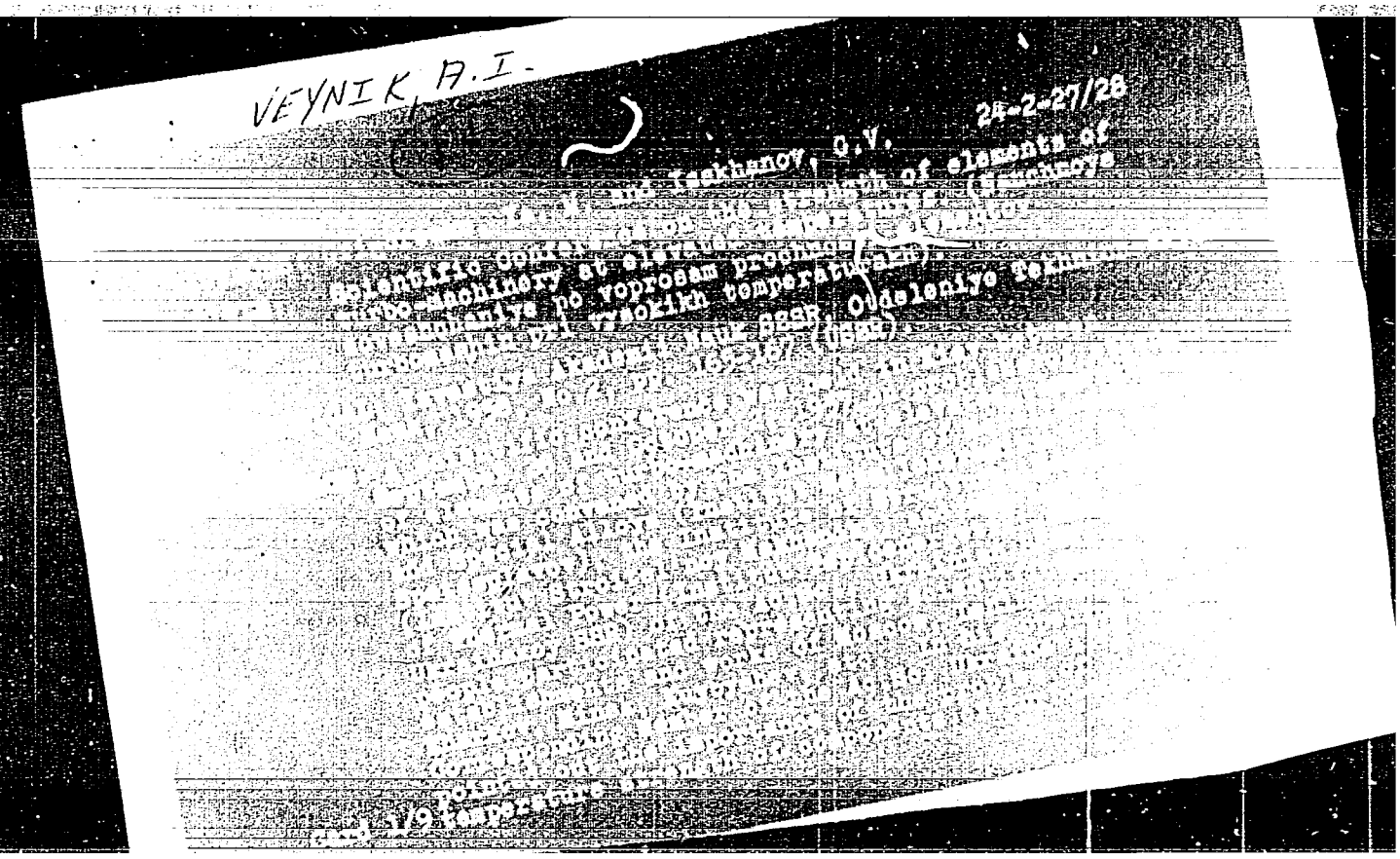
1. Radioisotopes---Applications 2. Scientific reports P. N.

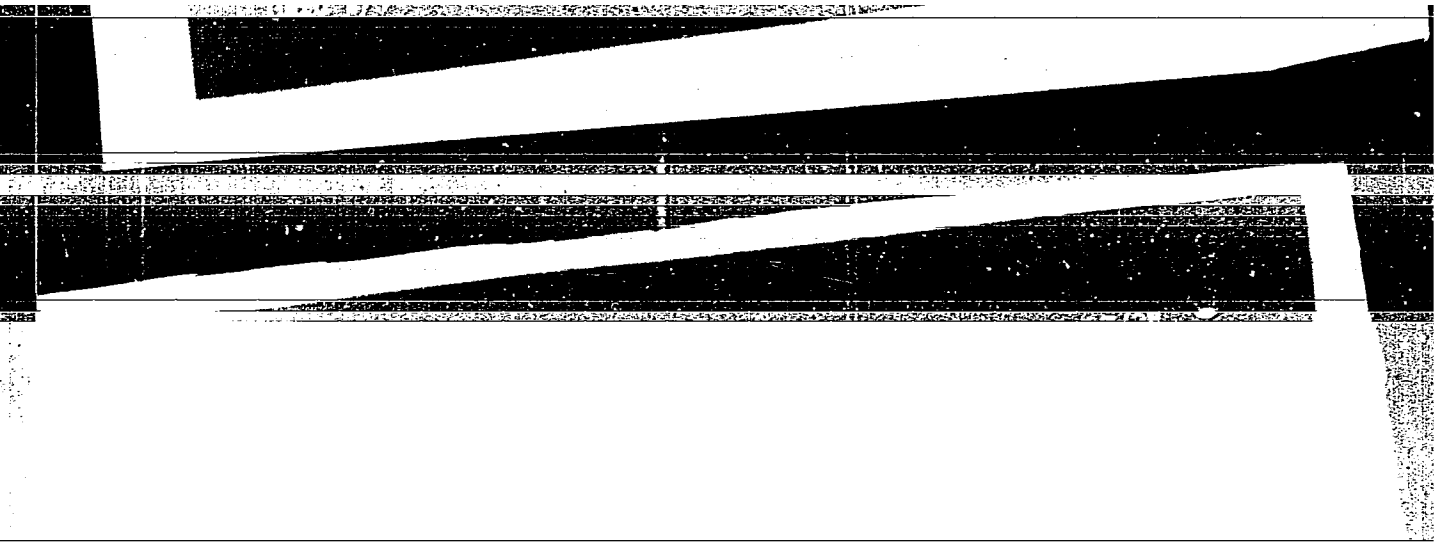
Card 1/1

VEYNIK, A.I.

Approximate method for solving problems in thermal conductivity.
Inzh.-fiz.zhur. no.2:3-12 F '58. (MIRA 13:1)

1. Institut energetiki AN BSSR, Minsk.
(Heat--Conduction) (Approximate computation)





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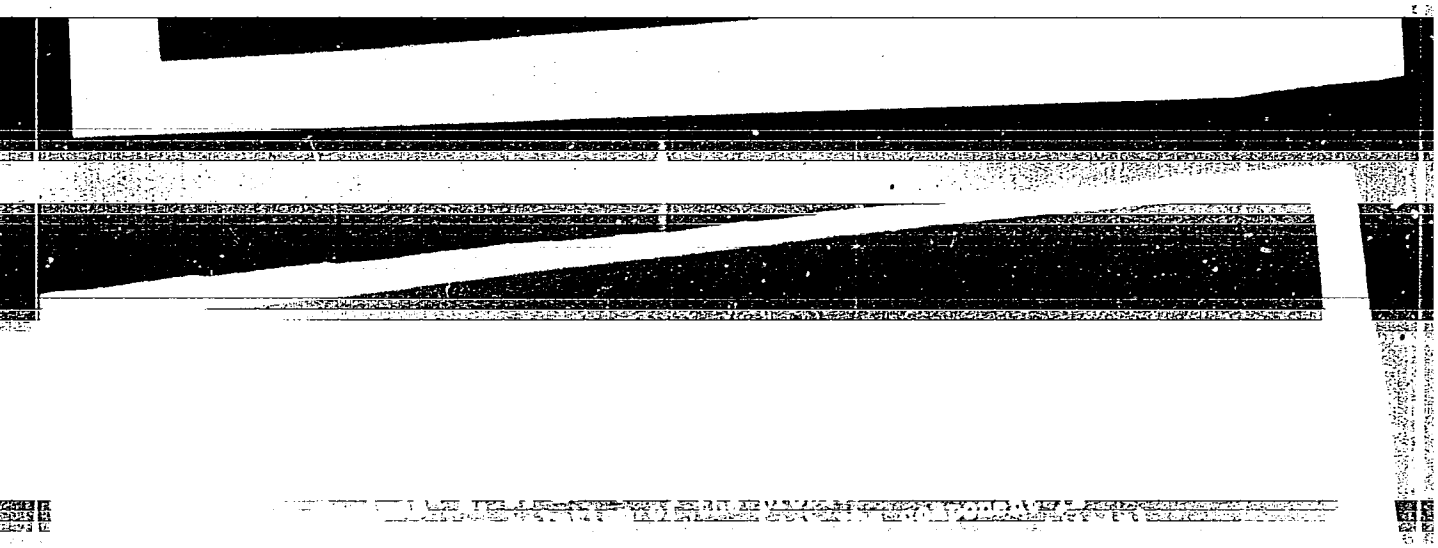

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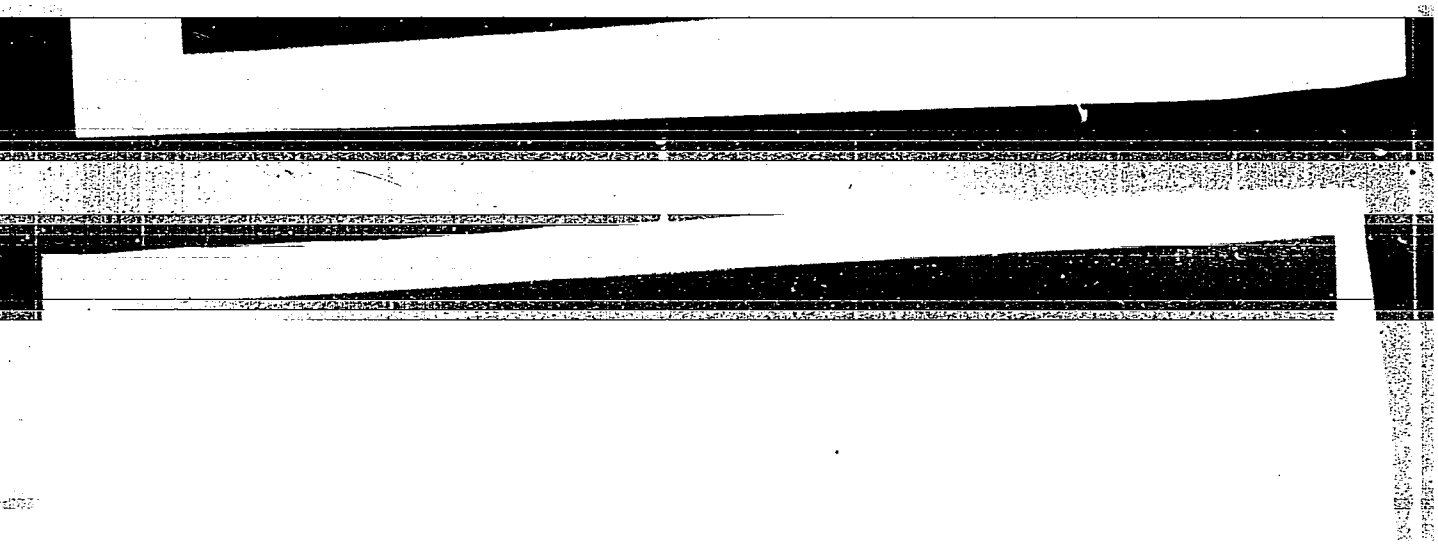

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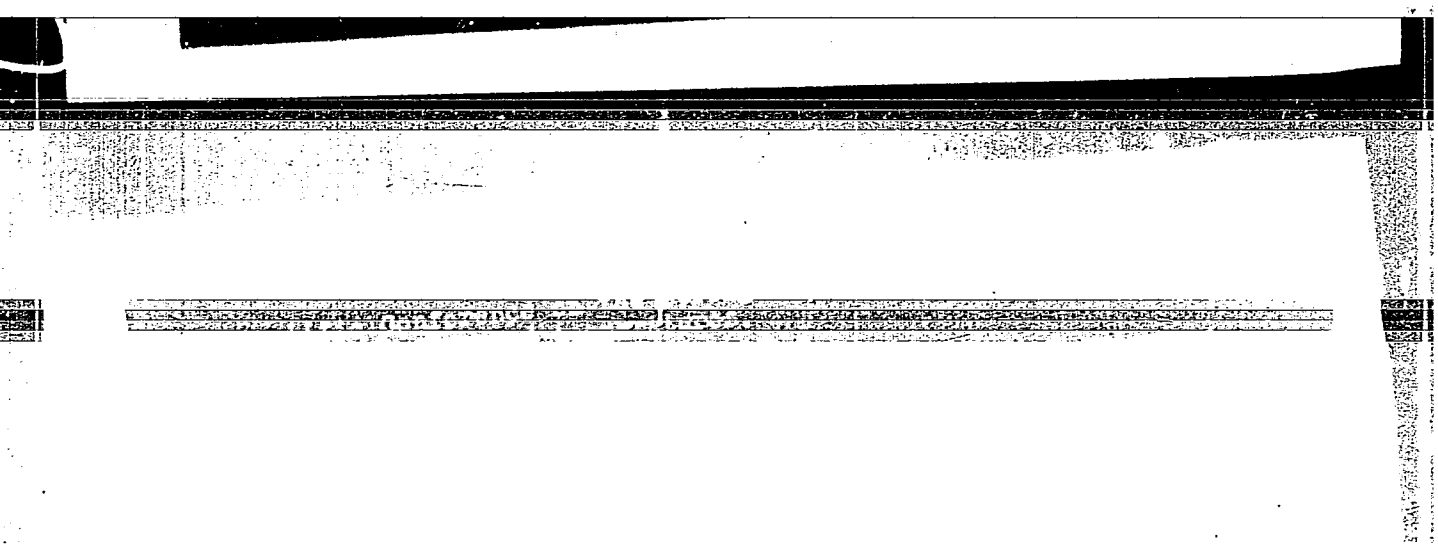

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R001859630010-8"

VEYNIK, A. I.

"On the Theory of forced Cooling of Castings and the Experience in this Method at the Novo-Kramatorskiy i Minskiy stankostroitel'nyy Zavodov(novo-Kramatorsk and Minsk Machine Tool Plants) which Developed this Methhod in the Production of Lare Castings."

report presented at Scientific-Technical Sessision on Progressive Technology of Casting Molds, organized by the NTOMAShPROM of the Khar'kov Oblast', in Khar'kov, 14-16 Nov 1957.

Liteynoye Proizvodstvo, 1958, No. 4, pp. 28-30

VEYNIK, A.I.

Calculating the ingot-solidification process. Inzh.-fiz. zhur. no. 6:68-76 Je '58. (MIRA 11:7)

1. Institut energetiki AN BSSR, Minsk.
(Solidification)
(Metal castings)

SOV/58-59-9-20038

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 86 (USSR)

AUTHOR: Veynik, A I.

TITLE: The Kinetic Theory of Heat Capacity

PERIODICAL: Tr. In-ta energ. AN BSSR, 1958, Nr 6, pp 166 - 171

ABSTRACT: Formulae for the molar heat capacity in the case of a constant pressure μc_p and a constant volume μc_v are expressed in terms of quantities which characterize the distributions of the internal energy among various components, and in terms of the number of atoms in a molecule j. For gases $\mu c_v = (j + 4/3) \chi_0 T$, $\mu c_p = (j + 2) \chi_0 T$; for liquids $\mu c_v = 2 (j + 1) \chi_0 T$; and for solid crystalline bodies $\mu c_v \sim 2 j \chi_0 T$, where χ_0 is the molar heat capacity (the capacity in relation to the thermal charge) per one vibrating particle in the molecule. The author provides graphs of μc_p versus j and T, computed according to these formulae. The values of μc_p, which are plotted on these graphs for various substances in accordance with data appearing in the literature, are in good agreement with the calculations in the case of large values of j.

B.Z. Katsenelenbaum

Card 1/1

VEYNIK, A.I.; YERMAKOV, V.S.; LYKOV, A.V.

Applying the Onsager theory to the study of the diffusion of neutrons in absorbing media of nuclear reactors. Inzh.-fiz. zhur. no.10:123-129 O '58. (MIRA 11:11)

1. Institut energetiki AN BSSR, g. Minsk.
(Nuclear reactors) (Nuclear physics)

VEYNIK, A. I.

UNESCO Conf. on Radioactive Isotopes, Paris, Sept 1957

The Practice of the Application of Isotopes for Technical Purposes. Vestnik AN SSSR, v. 28, No. 1, 1958. 30-1-13/39

application of radioactive isotopes for the solution of certain problems of the diffusion theory. They developed a method which makes it possible to measure the diffusion- and thermodynamic characteristics of metallic mixed crystals simultaneously. The author described the methods of research by means of radioactive isotopes of the equilibrium of the distribution of elements between liquid iron and slags. O. S. Bogdanov and his collaborators described the methods of the application of radioactive isotopes for the investigation of processes of flotation and ore enrichment. The flotoreagents were marked by radioactive isotopes of sulphur, carbon, phosphorus, copper, iron, zinc, and calcium. Great scientific and practical interest was aroused by the problem of the solubility of slightly volatile substances in steam under high pressure; a report on this subject was delivered by M. A. Styrikovich. A. I. Veynik spoke about the application of isotopes for the investigation of heat- and mass transfer for the development of rational methods of drying porous materials. The conference showed that in the USSR and in other countries increased attention is being paid to the determination of new methods of using radioactive isotopes, both in industry and in agriculture, and that

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The Practice of the Application of Isotopes for Technical Purposes. 3-2-13,'39

this is done not to the least extent because modern atomic industry is able to supply enormous quantities of these substances every day.

AVAILABLE: Library of Congress

1. Isotopes-Applications

Card 3/3

24(8) PHASE I BOOK EXPLOITATION SOV/2542

Veynik, Al'bert Iozefovich

Priblizhennyy raschet protsessov teploprovodnosti (Approximate Calculation of Heat Conduction Processes) Moscow, Gosenergoizdat, 1959. 182 p. 5,800 copies printed.

Ed.: D.A. Labuntsov; Tech. Ed.: G.Ye. Larionov.

PURPOSE: This monograph is intended for a wide circle of engineering, technical, and scientific workers.

COVERAGE: The monograph describes an approximate calculation method for heat-conduction processes, based on initially excluding from the differential equations of heat balance one or several independent variables (for instance, the three-dimensional coordinates). By this method problems with boundary conditions of the first, second, third, and fourth kind were solved, that is, all the basic problems of the theory of heat conductivity. Among these were considered processes of heat propagation in bodies of

Card 1/7

Approximate (Cont.) SOV/2542

complex configuration and also in bodies where a change in the aggregate state of matter takes place. A special feature of this method is its exceptional simplicity- only well-known tabulated integrals need be used in the solution of the problems. No personalities are mentioned. There are 35 references: 32 Soviet (including 1 translation), 1 English, 1 French, and 1 German.

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PHASE I BOOK EXPLOITATION SOV/3776

Veynik, Al'bert Iosifovich

Teploobmen mezhdu slitkom i izlozhnitsey (Heat Exchange Between Ingot and Mold) Moscow, Metallurgizdat, 1959. 357 p. Errata slip inserted. 3,650 copies printed.

Ed. of Publishing House: M.R. Lanovskaya; Tech. Ed.: P.G. Islen'tyeva.

PURPOSE: This book is intended for technical personnel working in metallurgical and machine-building plants and in scientific research institutes. It may also be used by students and professors of metallurgical and machine-building schools of higher education.

COVERAGE: The book discusses results of investigations on heat exchange between ingot and mold. A general classification of various conditions of ingot production is presented. Recommendations are given concerning the simplification of derived formulas for many particular cases (cooled and noncooled molds, two-layer molds, etc.). This simplification should help to introduce theoretical calculations into practice. The physical interpretation of

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the phenomena studied is also presented. No personalities are mentioned. There are 58 references: 41 Soviet, 10 English, 6 German, and 1 French.

TABLE OF CONTENTS:

IVEY N.K, A.I.

21(1) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This 1st-second volume of a six-volume collection on the peaceful uses of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Koryakin is the science editor of this volume. See SOV/2061 for titles of all volumes of the set. References appear at the end of the articles.

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SOV/170-59-2-22/23

10(5)

AUTHOR: Veynik, A.I.

TITLE: On the Remarks by A.A. Gukhman

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 2, pp 150-155 (USSR)

ABSTRACT: This is a reply by the author to the criticism voiced by A.A. Gukhman on his article [Ref 1]. The Gukhman critical review was published in the same issue of this periodical, the preceding article. The author analyzes 9 critical remarks made by Gukhman and disagrees with them, rejecting them as being, in his opinion, erroneous.
There are: 1 graph and 6 Soviet references.

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SOV/170-59-3-20/20

AUTHOR: Veynik, A.I.

TITLE: On the Reply of A.A. Gukhman (Ob otvete A.A. Gukhmana)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 3, p 120 (USSR)

ABSTRACT: The author states that his reply to the reviewer, A.A. Gukhman, contains a sufficiently detailed and clear exposition of his viewpoint and that he does not see any reasons for changing this viewpoint.

Card 1/1

VEYNIK, A.I., prof., red.; KONTSEVAYA, T.V., red.; KUZ'MENOK, P.T., tekhred.

[Heat exchanges in founding] Problemy teploobmena pri lit'e. Pod red. A.I.Veinika. Minsk, Redaktsionno-izd.otdel BPI im. I.V.Stalina, 1960. 228 p. (MIRA 14:3)

1. Minsk. Belorusskiy politekhnicheskiy institut. 2. Chlen-korrespondent AN BSSR (for Veynik).
(Founding) (Heat--Transmission)

VEYNIK, A.I.

PHASE I BOOK EXPLOITATION SOV/4343

Soveshchaniye po teorii liteynykh protsessov, 3d

Usadochnyye protsessy v metallakh; trudy soveshchaniya (Shrinkage Processes in Metals; Transactions of the Third Conference on the Theory of Casting Processes) Moscow, AN SSSR, 1960. 281 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B.B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V.S. Rzheznikov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for scientific workers, engineers, technicians of scientific research institutes and industrial plants, and for faculty members of schools of higher education.

COVERAGE: The collection contains technical papers presented at the Third Conference on the Theory of Casting Processes, organized by Liteynaya sektsiya Komissii po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Casting Section of the Commission for Machine-Building Technology of the Institute of Science of Machines, Academy of Sciences USSR) and by Institut metallurgii imeni Baykova

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AN SSSR (Institute of Metallurgy imeni A.A. Baykov, Academy of Sciences USSR). The most serious defects in castings, ingots, and welds as a result of metal shrinkage are reviewed. Factors contributing to the formation of shrinkage cavities, porosity, cracks, fissures, distortion, and internal stresses are analyzed along with measures taken to prevent and remedy them. The hydrodynamics of molten metals and the process of solidification of metals are discussed. Also presented are resolutions adopted at the Conference with regard to the problem of shrinkage in metals. No personalities are mentioned. Most papers are accompanied by bibliographic references, the majority of which are Soviet.

TABLE OF CONTENTS:

II. SHRINKAGE POROSITY

PHASE I BOOK EXPLOITATION SOV/3979

Veynik, Al'bert Iozefovich

Teoriya zatverdevaniya otlivki (Theory of Solidification of Castings) Moscow, Mashgiz, 1960. 434 p. Errata slip inserted. 6,000 copies printed.

Reviewer: P.G. Novikov, Candidate of Technical Sciences; Ed.: G.F. Balandin, Candidate of Technical Sciences; Ed. of Publishing House: L.A. Osipova; Tech.Ed.: B.I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: This book is intended for engineers of metallurgical plants and workers of scientific research institutions. It may also be of use to faculty members and students of schools of higher technical education.

COVERAGE: The author attempts to develop a method of making castings with certain given properties. He generalizes his investigations in the field of the theories of solidification of castings made both at a constant temperature and within the range of crystallization temperatures. He presents results of theoretical

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and experimental analyses of laws governing the solidification of metals and describes the methods of influencing this process. He stresses the simplification of mathematical tools of investigation and the physical nature of the phenomena under review. The appendix contains a number of tables showing the physical properties of certain metals, alloys, non-metallic materials and mixtures. The author acknowledges comments of P.G. Novikov and G.F. Balandin. There are 175 references: 138 Soviet, the rest English, German, French, and Czech.

TABLE OF CONTENTS:

AKSENOV, P.N.; BERG, P.P.; GODASHKOV, N.M.; VEYNIK, A.I.; GORSHKOV, A.A.; ZHAROV, N.T.; ZEUKOV, A.A.; ZOROKHOVICH, I.Z.; KUMANIN, I.B.; LEVI, L.I.; LYASS, A.M.; MARIYENBAKH, L.M.; OHLOV, G.M.; PORUCHIKOV, Yu.P.; RABINOVICH, B.V.; STOLBOVOY, S.Z.; FEYGEL'SON, B.Yu.; VASILEVSKIY, P.F., red.; KLOCHNEV, N.I., red.; KONSTANTINOV, L.S., red.; POLYAKOV, Ya.G., red.; MARKIZ, Yu.L., red.izd-va; UVAROVA, A.F., tekhn.red.

[Theory of founding processes] Voprosy teorii liteynykh protsessov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 692 p. (MIRA 13:7)

(Founding)

VEYNIK, A.I.

Thermodynamics of a die-casting mold. Sbor.nauch.trud.Fiz.-tekh. inst.AN BSSR no.6:150-161 '60. (MIRA 14:6)
(Die casting) (Thermodynamics)